

Material Safety Data Sheet (MSDS)

PRODUCT NAME
Lugol's Solution

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Manufacturer's Name
SouthEast Phytoplankton Monitoring Network (SEPMN)

Emergency Telephone Number
(843) 762-8857

Address
Hollings Marine Laboratory
c/o Steve Morton, Ph.D.
331 Fort Johnson Road
Charleston, S.C. 29412-9110

Telephone Number for Information
(843) 762-8857

Date Prepared
August 11, 2006

Signature of Preparer (optional)

SECTION II – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS #	TLV Units	Percent (%)
Iodine	7553-56-2	STEL: 01 ppm	5
Potassium Iodide	7681-11-0	None established	10
Water	7732-18-5	None established	84
Glacial Acetic Acid *	64-19-7	STEL: 15 ppm 8h TWA: 8 ppm	* negligible amount added

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	100 °C	Specific Gravity (H₂O = 1)	> 1
Vapor Pressure (mm Hg)	N/A	Melting Point	N/A
Vapor Density (Air = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	Complete		
Appearance and Odor	Dark amber (brown) liquid. Iodine odor.		

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point	N/A	Flammable Limits	N/A	LEL	N/A	UEL	N/A
Extinguishing Media	Use extinguishing media appropriate to surrounding fire.						
Special Fire Fighting Procedures	Use dry chemical CO ₂ , alcohol foam or water spray. Wear an approved self-contained breathing apparatus and full protective clothing.						
Unusual Fire and Explosion Hazards	N/A						
Firefighting	Protective Equipment: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.						

SECTION V – STABILITY AND REACTIVITY DATA

Stability	Unstable Stable X	Conditions to Avoid	Direct light and heat; Incompatible materials
Incompatibility (Materials to Avoid)	Gaseous ammonia, acetaldehyde, sodium azide, sodium hydride, other reducing agents		
Hazardous Decomposition or Byproducts	Hydrogen iodide, iodine, potassium oxides		
Hazardous Polymerization	May Occur Will Not Occur X	Conditions to Avoid	N/A

SECTION VI – HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	YES	Eye?	YES	Skin?	YES	Ingestion?	YES
Health Hazards								
Inhalation	May cause respiratory tract irritation.							
Eye	May cause eye irritation.							
Skin	Mild irritation and brown staining.							
Ingestion	May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause gastric disturbances and electrolytic imbalance.							
Carcinogenicity:	NO							
Teratogenicity:	Potassium iodide has been observed to cause developmental abnormalities of the endocrine system in human fetuses.							
Signs and Symptoms of Exposure		May cause “red eye” with tearing headaches and rash.						
Medical Conditions		Generally aggravated by exposure. May aggravate lung and heart disease.						
Emergency and First Aid Procedures								
Eye Contact	Flush with running water for at least 15 minutes, keeping eyelids open. Get medical aid.							
Skin Contact	Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Get medical aid if irritation develops or persists.							
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical aid if cough or other symptoms appear.							
Ingestion	Call Poison Control Center immediately.							

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled	Clean spills immediately wearing the proper PPE (section VIII). Dilute with water and absorb with sand or dry inert material.
Waste Disposal Method	Sweep or scoop into a closed container, ventilate area and wash spill site after material pickup is complete. Observe all federal, state and local environmental regulations.
Precautions to Be Taken in Handling and Storing	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Store in cool, dry, dark, well-ventilated area, away from incompatible materials.
Other Precautions	N/A

SECTION VIII – CONTROL MEASURES

Respiratory Protection	Government approved respirator		
Ventilation	Local Exhaust	YES	Special N/A
	Mechanical (General)	YES	Other N/A
Protective Gloves	Compatible chemical-resistant gloves		Eye Protection Chemical safety goggles (OSHA 29 CFR 1910.133)
Other Protective Clothing or Equipment	Wear appropriate protective clothing to prevent skin exposure.		
Work/Hygienic Practices	N/A		
Exposure Limits	No OSHA vacated PELs are listed for iodine, potassium iodide, and water; No TLVs are established for this solution (ACGIH 2001).		